

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of creating dot data representing recording states of ink dots in order to perform color printing, with a scanner print system utilizing main scanning and sub-scanning, by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the method comprising the steps of:
 - (a) providing a print head that includes a plurality of nozzle groups for ejecting that eject plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels;
 - (b) storing color image data for an area a partial area of an image to be printed corresponding to a height of entire nozzles of the print head in the sub scanning direction that are used during each main scanning pass of color printing into a first buffer, but not the entirety of the color image data for the image to be printed;
 - (c) selecting not the entirety but a part of the stored color image data that represent a color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;
 - (d) performing at least a color conversion process on the selected color image data and not on the entirety of the color image data and a halftone process that uses a threshold pattern having a printing resolution on the selected converted color image data on the plurality of

printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

(e) outputting the dot data from the second buffer,

wherein the color image data has a resolution Rdata which is lower than a printing resolution Rprint, and

the selecting includes repeatedly selecting an identical pixel value of the color image data (Rprint/Rdata) times for use in the halftone process.

2-3. (canceled).

4. (currently amended): A method according to claim 1, wherein
in cases in which when print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the performing the step (d) includes replacing values of dot data for the non recording-subject pixel positions among dot data on each printing-subject line with a value representing non-formation of dot.

5. (currently amended): A print control device for creating dot data representing recording states of ink dots in order to perform color printing, with a scanning print system utilizing main scanning and sub-scanning, by ejecting ink from nozzles of a print head during

main scanning to thereby record ink dots on a printing medium, the print head having a plurality of nozzle groups ~~for ejecting~~ that eject plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels, the print control device comprising:

a first processor for storing color image data for ~~an area~~ a partial area of an image to be printed corresponding to a height of entire nozzles of the print head in the sub scanning direction that are used during each main scanning pass of color printing into a first buffer, ~~but not the entirety of the color image data for the image to be printed~~;

a second processor for selecting ~~not the entirety but a part of the stored~~ color image data that represent a color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

a third processor for performing ~~at least a color conversion process on the selected color image data and not on the entirety of the color image data and a halftone process that uses a threshold pattern having a printing resolution on the selected converted~~ color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

a fourth processor for outputting the dot data from the second buffer,
~~wherein the color image data has a resolution Rdata which is lower than a printing resolution Rprint, and~~

the selecting includes repeatedly selecting an identical pixel value of the color image data (Rprint/Rdata) times for use in the halftone process.

6-7. (canceled).

8. (currently amended): A print control device according to claim 5, wherein in cases in which when print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the third processor performs replacing values of dot data for the non recording-subject pixel positions among dot data on each printing-subject line with a value representing non-formation of dot.<

9. (currently amended): A computer program product for creating dot data representing recording states of ink dots in order to perform color printing, with a scanning print system utilizing main scanning and sub-scanning, by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the print head having a plurality of nozzle groups for ejecting that eject plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels, the computer program product comprising:
a computer readable medium; and

a computer program stored on the computer readable medium, the computer program causing a computer to implement the functions of:

(a) storing color image data for an area a partial area of an image to be printed

corresponding to a height of entire nozzles of the print head in the sub scanning direction that are used during each main scanning pass of color printing into a first buffer, but not the entirety of the color image data for the image to be printed;

(b) selecting not the entirety but a part of the stored color image data that represent a

color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

(c) performing at least a color conversion process on the selected color image data and

not on the entirety of the color image data and a halftone process that uses a threshold pattern having a printing resolution on the selected converted color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

(d) outputting the dot data from the second buffer,

wherein the color image data has a resolution Rdata which is lower than a printing resolution Rprint, and

the selecting includes repeatedly selecting an identical pixel value of the color image data (Rprint/Rdata) times for use in the halftone process.

10-11. (canceled).

12. (currently amended): A computer program product according to claim 9, wherein
when in cases in which print pixel positions on each printing-subject line subject to
recording of ink dots during the single main scan include recording-subject pixel positions that
are subject to recording of ink dots and non recording-subject pixel positions that are not subject
to recording of ink dots during the single main scan, the function (d) performing includes
replacing values of dot data for the non recording-subject pixel positions among dot data on each
printing-subject line with a value representing non-formation of dot.